

ABSTRACT OF THE DISCLOSURE

An optical imaging device includes a reference scanning unit offering a high signal-to-noise ratio and capable of scanning an object rapidly. An interference optical system can be realized inexpensively. In the optical imaging device, low coherent light passed through an optical coupler and another optical coupler, irradiated from an optical scanner probe, reflected from an observed point in a living tissue, returned to the optical coupler, propagated over a fourth SM optical fiber, and routed to another optical coupler shall be referred to as sample light. Light passed through an optical length variation optical system via the optical coupler and routed to the optical coupler shall be referred to as reference light. At this time, a difference between a delay time undergone by the sample light and a delay time undergone by the reference light is proportional to a difference between an optical length for the sample light and an optical length for the reference light. When the optical length difference falls within a coherence length, the sample light and reference light interfere with each other. An interfering signal is acquired into a computer through detectors, a differential amplifier, a demodulator, and an A/D converter.